



NORTEL

Nortel Ethernet Routing Switch 8600

Terminology

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Contents

| | |
|-------------------------|----------|
| Software license | 5 |
|-------------------------|----------|

| | |
|----------------------------|----------|
| New in this release | 9 |
|----------------------------|----------|

Other changes 9

Terminology 9

| | |
|---------------------|-----------|
| Introduction | 11 |
| A | 13 |
| B | 17 |
| C | 21 |
| D | 25 |
| E | 29 |
| F | 31 |
| G | 33 |
| H | 35 |
| I | 37 |
| J | 41 |
| L | 43 |
| M | 47 |
| N | 53 |
| O | 55 |
| P | 57 |
| Q | 63 |
| R | 65 |
| S | 71 |
| T | 77 |
| U | 81 |
| V | 83 |
| W | 85 |

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New in this release

The following section details what's new in *Nortel Ethernet Routing Switch 8600 Terminology, NN46205-102* for Release 5.0:

- [“Other changes” \(page 9\)](#)

Other changes

For information about changes that are not feature-related, see the following sections:

Terminology

Nortel Ethernet Routing Switch 8600 Terminology, NN46205-102 is a new document for Release 5.0. This document consolidates all terminology and acronyms into one document. Use this document for information about common acronyms and terms used in the Nortel Ethernet Routing Switch 8600 documentation.

Introduction

This document provides information about the terms and acronyms used in the Nortel Ethernet Routing Switch 8600 documentation.

Navigation

- [“A” \(page 13\)](#)
- [“B” \(page 17\)](#)
- [“C” \(page 21\)](#)
- [“D” \(page 25\)](#)
- [“E” \(page 29\)](#)
- [“F” \(page 31\)](#)
- [“G” \(page 33\)](#)
- [“H” \(page 35\)](#)
- [“I” \(page 37\)](#)
- [“J” \(page 41\)](#)
- [“L” \(page 43\)](#)
- [“M” \(page 47\)](#)
- [“N” \(page 53\)](#)
- [“O” \(page 55\)](#)
- [“P” \(page 57\)](#)
- [“Q” \(page 63\)](#)
- [“R” \(page 65\)](#)
- [“S” \(page 71\)](#)
- [“T” \(page 77\)](#)
- [“U” \(page 81\)](#)

- “V” (page 83)
- “W” (page 85)

A

access control entry (ACE)

One of the filter rules that comprise an access control list (ACL). A filter rule statement defines a pattern (in a packet) and the desired behavior for packets that carry the pattern. When the packets match an ACE rule, the specified action executes.

access control list (ACL)

An ordered list of filter rules referred to as access control entries. The ACEs provide specific actions, such as dropping packets within a specified IP range, or a specific Transmission Control Protocol (TCP) or User Datagram Protocol (UDP) port or port range. When an ingress or egress packet meets the match criteria specified in one or more ACEs within an ACL, the corresponding action executes.

access control template (ACT)

Defines the selection of match fields for a given ACL. Before you add an ACE to an ACL, you must first associate the ACL with an existing ACT.

add/drop multiplexer (ADM)

A network element in which facilities are added, dropped, or passed directly through for transmission to other network elements.

Address Resolution Protocol (ARP)

Maps an IP address to a physical machine address, for example, maps an IP address to an Ethernet media access control (MAC) address.

address resolution unit (ARU)

An application specific integrated circuit (ASIC) that makes forwarding decisions that do not require CPU activity and, therefore; does not adversely affect forwarding speed.

Advanced Encryption Standard (AES)

A privacy protocol. AES is the current encryption standard (FIPS-197) intended for use by U.S. government organizations to protect sensitive information.

aggregate

A prefix length that is formed by combining several specific prefixes. The resulting prefix is used to combine blocks of address space into a single routing announcement.

American Standard Code for Information Interchange (ASCII)

A code for representing characters in computers. ASCII uses uppercase and lowercase alphabetic letters, numeric digits, and special symbols.

application-specific integrated circuit (ASIC)

A application-specific integrated circuit developed to perform more quickly and efficiently than a generic processor.

area border router (ABR)

A router attached to two or more areas inside an Open Shortest Path First (OSPF) network. ABRs play an important role in OSPF networks by condensing the amount of disseminated OSPF information.

asymmetric digital subscriber line (ADSL)

A standard that allows digital broadband (over 6 Mbit/s) signals and plain old telephone service to transmit up to 12 000 feet over a twisted copper pair.

Asynchronous Transfer Mode (ATM)

A transfer mode that organizes information into cells and the recurrence of cells depends on the required or instantaneous bit rate.

attenuation

The decrease in signal strength in an optical fiber caused by absorption and scattering.

attribute

A unit of data that is used by BGP to describe any of the following prefixes: AS-PATH, LOCAL-PREF, NEXT-HOP, and so on.

automatic protection switching (APS)

A Synchronous Optical Network (SONET) feature that protects against line failure.

AS (autonomous system)

A set of routers under a single technical administration, using a single IGP and common metrics to route packets within the AS, and using an EGP to route packets to other ASs.

AS confederation

A single logical AS that comprises multiple sub-ASs to ensure scalability.

autonomous system border router (ASBR)

A router attached at the edge of an OSPF network. An ASBR uses one or more interfaces that run an interdomain routing protocol such as BGP. In addition, a router distributing static routes or Routing Information Protocol (RIP) routes into OSPF is considered an ASBR.

ASN (autonomous system number)

A two-byte number that is used to identify a specific AS.

B

backplane forwarding module (BFM)

Connects the switching module on the Web Switching Module (WSM) and SSL Acceleration Module (SAM) to the Nortel Ethernet Routing Switch 8600 backplane.

backup designated router (BDR)

Assumes the designated router (DR) role for the Open Shortest Path First (OSPF) protocol if the DR fails.

bandwidth

A measure of transmission capacity for a particular pathway, expressed in megabits per second (Mbit/s).

BAP memory controller (BMC)

A Field Programmable Gate Array (FPGA) device on the R module.

basic rate interface (BRI)

A type of Integrated Services Digital Network (ISDN) access provided by a set of time division multiplexed digital channels that include two B-channels at 64 kbit/s (for digitized voice and data), one D-channel at 16 kbit/s (for signaling information), and one or more maintenance channels.

Baysecure Access Control (BSAC)

A Nortel Remote Authentication Dial-In User Service (RADIUS) server.

bit error rate (BER)

The ratio of the number of bit errors to the total number of bits transmitted in a given time interval.

BGP (Border Gateway Protocol)

An inter-domain routing protocol that provides loop-free inter-domain routing between autonomous systems (ASs) or within an AS.

BGP neighbor

BGP routers that have interfaces to a common network.

BGP peer

A relationship that is formed between any two routers that open a TCP connection to each other for the purpose of exchanging routing informations.

BGP session

An active connection between two routers running BGP.

BGP speaker

An entity within a BGP router that is used to communicate with other BGP speakers by establishing a peer-to-peer session.

bit interleaved parity (BIP)

A simple parity check mechanism.

blade

A synonym for a line card.

Bootstrap Protocol (BootP)

A User Datagram Protocol (UDP)/Internet Protocol (IP)-based protocol that a booting host uses to configure itself dynamically and without user supervision.

bootstrap router (BSR)

A dynamically elected Protocol Independent Multicast (PIM) router that collects information about potential Rendezvous Point routers and distributes the information to all PIM routers in the domain.

Border Gateway Protocol (BGP)

An exterior gateway protocol that routers use in different autonomous systems (AS) to exchange routing information.

boundary port

A bridge port that attaches a Multiple Spanning Tree (MST) bridge to a LAN in another region.

Breaker Interface Panel (BIP)

A central rack location that connects redundant input DC-power feeds and routes to one or two 8010co chassis. The BIP provides an alarm module and display panel that monitors system components, generates alarms, and controls LED status indicators.

Bridge Protocol Data Unit (BPDU)

A data frame used to exchange information among the bridges in local or wide area networks for network topology maintenance.

burst tolerance (BT)

For ATM traffic, the maximum burst size (MBS) minus 1 multiplied by the difference between the peak cell rate (PCR) and sustained cell rate (SCR) intervals.

C

cable assembly

An optical-fiber cable with connectors installed on one or both ends. The cable assembly interconnects the cabling system with opto-electronic equipment at either end of the system. Cable assemblies with connectors only on one end are called pigtails. Cable assemblies with connectors on both ends are called jumpers or patch cords.

cable plant

All the optical elements, such as fiber connectors and splices, between a transmitter and a receiver.

candidate bootstrap router (C-BSR)

Provides backup protection in case the primary rendezvous point (RP) or bootstrap router (BSR) fails. Protocol Independent Multicast (PIM) uses the BSR and C-BSR.

Central Office (CO)

A major equipment center that serves the communication traffic of a specific geographical area.

central processor unit (CPU)

The main system processor that resides on the CSU.

Challenge Handshake Protocol (CHAP)

An access protocol that exchanges a random value between the server and the client and is encrypted with a challenge password.

Circuitless IP

A virtual interface that does not map to any physical interface. This interface is often called a *loopback*.

class of service (CoS)

A method used to manage traffic congestion based on the CoS level assigned to the packet.

classless interdomain routing (CIDR)

The protocol defined in RFCs 1517 and 1518 for using subnetwork masks, other than the defaults for IP address classes.

cluster

One or more route reflectors and their associated clients that form a relationship where the designated route reflectors provide route reflection for their clients, as well as nonclient peers.

coarse wavelength division multiplexing (CWDM)

A technology that uses multiple optical signals with different wavelengths to simultaneously transmit in the same direction over one fiber, and then separates by wavelength at the distant end.

command line interface (CLI)

A nongraphical user interface. When you use a CLI, you respond to a prompt by typing a command. After you enter the command, you receive a system response.

common and internal spanning tree (CIST)

The single spanning tree calculated by the Spanning Tree Protocol (STP) and Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP) to ensure that all LANs in a bridged Local Area Network (LAN) are simply and fully connected.

common spanning tree (CST)

The single spanning tree calculated by STP, RSTP, and MSTP to connect multiple spanning tree (MST) regions.

community

A BGP attribute that contains a list of 32-bit values used to identify a route as belonging to a category of routes. All of the routes in the category are treated equally by routing policies.

constant bit rate (CBR)

A data service that conveys bits regularly in time and at a constant rate, between source (transmitter) and sink (receiver), for example, follows a timing source or clock.

Custom AutoNegotiation Advertisement (CANA)

An enhancement of the IEEE 802.3 autonegotiation process on the 10/100/1000 copper ports. CANA offers improved control over the autonegotiation process. The system advertises all port capabilities that for tri-speed ports include 10 Mb/s, 100 Mb/s, 1000 Mb/s speeds and duplex and half-duplex modes of operation. This advertisement results in autonegotiation between the local and remote end that settles on the highest common denominator. CANA can advertise a user-defined subset of the capabilities that settle on a lower or particular capability.

customer edge (CE)

A router or switch located at a customer site that connects to a provider edge (PE) router.

customer premise equipment (CPE)

Equipment or inside wiring at the customer site that connects to telecommunications equipment.

cyclic redundancy check (CRC)

Ensures frame integrity is maintained during transmission. The CRS performs a computation on frame contents before transmission and on the receiving device. The system discards frames that do not pass the CRC.

D

Data Encryption Standard (DES)

A cryptographic algorithm that protects unclassified computer data. The National Institute of Standards and Technology publishes the DES in the Federal Information Processing Standard Publication 46-1.

Data Communications Equipment (DCE)

A network device (such as a modem) that establishes, maintains, and terminates a session.

Data Terminating Equipment (DTE)

A computer or terminal on the network that is the source or destination of signals.

database description (DD) packets

Exchanged when a link is initially established between neighboring routers that synchronizes their link state databases. The Open Shortest Path First (OSPF) protocol uses DD packets.

dampen

Indicates that routes which exhibit instability are not advertised until the routes become stable for a minimum time period.

denial-of-service (DoS)

Attacks that prevent a target server or victim device from performing its normal functions through flooding, irregular protocol sizes (for example, ping requests aimed at the victim server) and application buffer overflows.

dense wavelength division multiplexing (DWDM)

A technology that uses many optical signals (16 or more) with different wavelengths to simultaneously transmit in the same direction across one fiber, and then separates by wavelength at the distant end.

demultiplexing

The wavelength separation in a wavelength-division multiplexing system. The opposite of multiplexing.

designated router (DR)

A single router elected as the designated router for the network. In a broadcast or nonbroadcast multiple access (NBMA) network running the Open Shortest Path First (OSPF) protocol, a DR ensures all network routers synchronize with each other and advertises the network to the rest of the autonomous system (AS). In a multicast network running Protocol Independent Multicast (PIM), the DR acts as a representative router for directly connected hosts. The DR sends control messages to the rendezvous point (RP) router, sends register messages to the RP on behalf of directly connected sources, and maintains RP router status information for the group.

Device Manager (DM)

A graphical user interface (GUI) used to configure and manage the Nortel Ethernet Routing Switch 8600.

DiffServ (DS) boundary or access point

The edge of a DS domain in which classifiers and traffic conditioners are deployed.

DS field

Formerly called the IPv4 Type of Service (TOS) octet or the IPv6 Traffic Class octet. The DS field provides the Differentiated Services Code Point (DSCP) that is used for packet forwarding. These fields are part of the standard IPv4 header.

Differentiated Services Code Point (DSCP)

The first six bits of the DS field. The DSCP uses packet marking to guarantee a fixed percentage of total bandwidth to each of several applications (guarantees Quality of Service).

digital subscriber line (DSL)

In Integrated Services Digital Networks (ISDN), equipment that provides full-duplex service on a single twisted metallic pair at a rate sufficient to support ISDN basic access and additional framing, timing recovery, and operational functions.

digital subscriber line access multiplexer (DSLAM)

A network device, at a telephone company central office, that receives signals from multiple customer digital subscriber line (DSL) connections and uses multiplexing techniques to place the signals on a high-speed backbone line.

Dual port controller (DPC)

A Field Programmable Gate Array (FPGA) device on the R module.

dispersion

The broadening of input pulses as they travel the length of an optical fiber. The following types of dispersion exist:

- modal dispersion-caused by the many optical path lengths in a multimode fiber
- chromatic dispersion-caused by the differential delay at various wavelengths in an optical fiber
- waveguide dispersion-caused by light traveling through both the core and cladding materials in single-mode fibers

Distance Vector Multicast Routing Protocol (DVMRP)

A dense mode routing protocol that floods multicast data to all internetwork routers.

Distributed MultiLink Trunking (DMLT)

A point-to-point connection that aggregates similar ports from different modules to logically act like a single port, but with the aggregated bandwidth.

distribution tree

A set of multicast routers and subnetworks that allow the group members to receive traffic from a source.

Domain Name System (DNS)

A system that maps and converts domain and host names to IP addresses.

downstream node

Refers to the node that the packet enters on the downstream node.

downstream-on-demand (DoD)

A label switch router (LSR) distributes a forward equivalence class (FEC) label binding in response to an explicit request from another LSR. The Nortel Ethernet Routing Switch 8600 does not support downstream-on-demand.

downstream unsolicited (DU)

An LSR distributes label bindings to LSRs that do not explicitly request them.

dual inline memory module (DIMM)

A module that contains one or several random access memory (RAM) chips on a small circuit board with pins that connect it to the computer motherboard.

Duplicate Address Detection (DAD)

A method used to discover duplicate addresses in an IPv6 network.

Dynamic Host Configuration Protocol (DHCP)

A standard Internet protocol that dynamically configures hosts on an Internet Protocol (IP) network. DHCP extends the Bootstrap Protocol (BOOTP).

E

Electromagnetic Interference (EMI)

Electromagnetic radiation released from an electronic device that disrupts the operation or performance of another device.

Electrostatic Discharge (ESD)

The discharge of stored static electricity that can damage electronic equipment and impair electrical circuitry that results in complete or intermittent failures.

emulated LAN (ELAN)

A virtual LAN (VLAN) for Asynchronous Transfer Mode (ATM).

encoder-decoder (CODEC)

Compresses and decompresses audio and video data.

equal cost multipath (ECMP)

Distributes routing traffic among multiple equal-cost routes.

Ethernet switches (ES)

A family of frame-based computer networking technologies for local area networks (LANs).

Ethernet Services Module (ESM)

The ESM serves as the demarcation point between the enterprise customer and the service provider and utilizes an Ethernet user-to-network interface (UNI).

explicit route (ER)

Defines one or more hops in the label switched path (LSP) in a Multiprotocol Label Switching (MPLS) network.

explicit path

A Resource Reservation Protocol (RSVP) hop-by-hop tunnel that terminates on an interface IP address on the egress Label Edge Router (LER).

Extended Unique Identifier (EUI)

A 64-bit format used in assigning addresses automatically to IPv6 interfaces.

Extensible Authentication Protocol over LAN (EAPoL)

A port-based network access control protocol. EAPoL provides security in that it prevents users from accessing network resources before they are authenticated.

External BGP (EBGP)

A BGP session between two BGP speakers in different ASs.

Exterior BGP (EBGP)

A Border Gateway Protocol (BGP) used by routers that exchange information between two different Autonomous Systems.

F

far end fault indication (FEFI)

Determines that one of two unidirectional fibers, that form the connection between two switches, fails.

Feedback Output Queue (FOQ)

A mechanism that helps the Nortel Ethernet Routing Switch 8600 avoid switch fabric congestion.

FEC to NHLFE table (FTN)

A lookup table that is consulted for incoming, unlabeled packets to determine which label values to use when encapsulating the packet. (See also Next Hop Label Forwarding Entry [NHLFE]).

file allocation table (FAT)

A table that the operating system uses to locate files on a disk.

File Transfer Protocol (FTP)

A protocol that governs transferring files between nodes, as documented in RFC 959. FTP is not secure. FTP does not encrypt transferred data. Use FTP access only after you determine it is safe in your network.

forward equivalence class (FEC)

Specifies which packets map to a label switched path (LSP) in a Multiprotocol Label Switching (MPLS) network.

Frame Check Sequence (FCS)

G

Generalized Regular Expression Parser (GREP)

A Unix command used to search files for lines that match a given regular expression (RE).

get nearest server (GNS)

A request used by Internetwork Packet Exchange (IPX) clients to find a login server.

gigabit Ethernet (GE)

Ethernet technology with speeds up to 1 Gbit/s.

Gigabit Interface Converter (GBIC)

A hot-swappable input/output enhancement component designed for use with Nortel products to allow Gigabit Ethernet ports to link with other Gigabit Ethernet ports over various media types.

Global routing engine (GRE)

The base router or routing instance 0 in the Virtual Router and Forwarder (VRF).

global server load balancing (GSLB)

Serves content from several points to overcome scalability, availability, and performance issues inherent in distributing content across multiple geographic locations.

graphical user interface (GUI)

A graphical (rather than textual) computer interface.

H

High Availability (HA)

Activates two CPUs simultaneously. The CPUs exchange topology data so, if a failure occurs, either CPU can take precedence in less than 1 second with the most recent topology data.

Hypertext Transfer Protocol (HTTP)

Communications protocol for the Web.

Hypertext Transfer Protocol, Secure (HTTPS)

Communications protocol used to access a secure Web server.

incoming label map (ILM)

An index used to map an incoming labeled packet to an NHLFE.

Institute of Electrical and Electronics Engineers (IEEE)

An international professional society that issues standards and is a member of the American National Standards Institute and the International Standards Institute, and the International Standards Organization.

integrated service director (ISD)

The processor PCI Mezzanine Card (PrPMC) and disk drive on a firewall module.

Interior BGP (IBGP)

Routers that use the Border Gateway Protocol (BGP) within an autonomous system. The router redistributes BGP information to Interior Gateway Protocols (IGPs) that run in the autonomous path.

Interior Gateway Protocol (IGP)

Distributes routing information between routers that belong to a single autonomous system (AS).

internal router (IR)

A router with interfaces only within a single area inside an Open Shortest Path First (OSPF) network.

Internet Assigned Numbers Authority (IANA)

The central registry for various assigned numbers, for example, Internet protocol parameters (such as port, protocol, and enterprise numbers), options, codes, and types.

Internet Control Message Protocol (ICMP)

A collection of error conditions and control messages exchanged by IP modules in both hosts and gateways.

Internet Engineering Task Force (IETF)

A standards organization for IP data networks.

Internet Group Management Protocol (IGMP)

A host membership protocol used to arbitrate membership in multicast services.

Internet Group membership Authentication Protocol (IGAP)

An authentication and accounting protocol for clients that receives multicast streams.

Internet Protocol Control Packet (IPCP)

Establishes and configures Internet Protocol data transmission over a Point-to-Point Protocol link.

Internet Protocol Flow Information eXport (IPFIX)

An IETF standard that improves the Netflow V9 protocol. IPFIX monitors IP flows on the Nortel Ethernet Routing Switch 8600 platforms, and on other Nortel switching platforms.

Internet Protocol multicast (IPMC)

The technology foundation for audio and video streaming, push applications, software distribution, multipoint conferencing, and proxy and caching solutions.

Internet Protocol security (IPsec)

A secure version of the Internet Protocol (IP) that provides optional authentication and encryption at the packet level.

Internet Protocol version 4 (IPv4)

The protocol used to format packets for the Internet and many enterprise networks. IPv4 provides packet routing and reassembly.

Internet Protocol version 6 (IPv6)

An improved version of the IP protocol. IPv6 improves the IPv4 limitations of security and user address numbers.

Internetwork Packet Exchange (IPX)

A network layer protocol. IPX is similar to IP but does not guarantee packet delivery.

interswitch trunking (IST)

A feature that uses one or more parallel point-to-point links to connect two aggregation switches. The two aggregation switches use this channel to share information and operate as a single logical switch. Only one interswitch trunk can exist on each Split Multilink Trunking (SMLT) aggregation switch.

internal spanning tree (IST)

Runs in a given multiple spanning tree (MST) region. Within an MST region, you can configure multiple spanning instances. Instance 0 within a region is the IST.

J

jitter

The delay variance between received packets. Packets may not arrive at the destination address in consecutive order, or on a timely basis, and the signal can vary from its original reference timing. This distortion damages multimedia traffic.

L

label

A fixed length header that an LSR uses to forward packets along a Label Switched Path (LSP). A label represents a FEC.

label binding

An association between a label and a FEC, which can be advertised to neighbors to establish an LSP.

label advertise mode

This mode (downstream unsolicited or downstream on demand) determines when the interface distributes label mappings to the next hop upstream.

label distribution mode

This mode (independent or ordered) specifies how an LSR binds a label to a FEC.

Label Distribution Protocol (LDP)

Provides a mechanism for dynamic hop-by-hop label distribution between routers in a Multiprotocol Label Switching (MPLS) network. LDP assigns labels to IGP-learned routes and distributes the label bindings to its peers, to establish label switched paths (LSP) through the network.

LDP target address

IP address of the remote peer to which a targeted LDP session is formed. On the Ethernet Routing Switch 8600, this address is equivalent to the MPLS router ID of the remote peer and the CLIP address of the egress LER.

label edge router (LER)

Resides at the network edge to initiate and terminate label switched paths and assign packets to forward equivalence class (FEC) as traffic enters the Multiprotocol Label Switching (MPLS) network.

label information base (LIB)

A table of incoming labels, outgoing labels, and interface mappings.

label retention mode

This mode (liberal or conservative) specifies whether or not the interface retains label bindings that it receives

label stack

MPLS uses a label stack, which can contain multiple labels. For example, in a stack containing two labels, the bottom label represents the egress Peripheral Equipment (PE) and the top label represents the next hop along the LSP. To move a packet across the network, LSRs swap out the top label to forward the packet to the next hop.

label switched path (LSP)

An end-to-end unidirectional tunnel between MPLS-enabled routers. Data travels through the MPLS network over LSPs from the network ingress to the network egress.

label switched router (LSR)

A core router that operates between the source and destination LERs in an MPLS network. LSRs strip off the existing label and applies a new label that tells the next-hop LSR how to forward the packet.

label use mode

This mode (immediate or not immediate) specifies when the interface uses the label for the next hop.

last member query interval (LMQI)

The time between when the last IGMP member leaves the group and the stream stops.

latency

The time between when a node sends a message and receipt of the message by another node; also referred to as propagation delay.

Layer 2 (L2)

The Data Link Layer of the Open System Interconnection (OSI) model. Examples of Layer 2 protocols are Ethernet and Frame Relay.

Layer 3 (L3)

The Network Layer of the OSI model. Examples of Layer 3 protocols are Internet Protocol (IP) and Internetwork Packet Exchange (IPX).

light emitting diode (LED)

A semiconductor diode that emits light when a current passes through.

Lightweight Directory Access Protocol (LDAP)

A network protocol designed to work on TCP/IP stacks to extract information from a hierarchical directory such as X.500.

line card

A card that goes into slots 1 to 4 or 7 to 10 of a Nortel Ethernet Routing Switch 8600 chassis. The card provides network connectivity for various media (Layer 0) and protocol types. A card is also called a module.

Link Aggregation Control Protocol (LACP)

A protocol that exists between two bridge endpoints.

Link Aggregation Control Protocol Data Units (LACPDUs)**link aggregation group (LAG)**

A group that increases the link speed beyond the limits of any one single cable or port, and also increases the redundancy for higher availability.

link-state advertisement (LSA)

Packets that contain state information about directly connected links (interfaces) and adjacencies. Each Open Shortest Path First (OSPF) router generates the packets.

link-state database (LSDB)

A database built by each OSPF router to store LSA information. The router uses the LSDB to calculate the shortest path to each destination in the autonomous system (AS), with itself at the root of each path.

load balancing (LB)

The practice of splitting communication into two (or more) routes or servers.

local access transport area (LATA)

A geographical area where an operating company offers telecommunication-related services.

Local Area Network (LAN)

A data communications system that lies within a limited spatial area, uses a specific user group and topology, can connect to a public switched telecommunications network (but is not one).

Logical Link Control (LLC)

A protocol used in LANs to transmit protocol data units between two end stations. This LLC layer addresses and arbitrates data exchange between two endpoints.

Logical Provider Edge (LPE)

The LPE distributes the processing of VPNs across the Ethernet Routing Switch 8600.

M

management information base (MIB)

Defines system operations and parameters used for the Simple Network Management Protocol (SNMP).

marking

A process that uses defined rules to assign the Differentiated Services Code Point (DSCP) in a packet.

mask

A bit string that is used along with an IP address to indicate the number of leading bits in the address that correspond with the network part.

maximum burst size (MBS)

One of a set of traffic characterization values that defines traffic characteristics through the traffic descriptor types. MBS defines the length in cells of a traffic burst relative to the peak cell rate (PCR), which it cannot exceed, and the sustained cell rate (SCR), which it can exceed but only for a time period defined by burst tolerance (BT).

maximum transmission unit (MTU)

The largest number of bytes in a packet—the Maximum Transmission Unit of the port.

media

A substance that transmits data between ports; usually fiber optic cables or category 5 unshielded twisted pair (UTP) copper wires.

Media Access Control (MAC)

Arbitrates access to and from a shared medium.

media access unit (MAU)

The equipment in a communications system that adapts or formats signals, such as optical signals, for transmission over the propagation medium.

media dependent adapter (MDA)

An independent module, that features an input or output port that interfaces to a media connector.

Message Digest 5 (MD5)

A one-way hash function that creates a message digest for digital signatures.

metropolitan area network (MAN)

A broadband network that covers an area larger than a Local Area Network.

microflow

A single instance of an application-to-application packet flow identified by source address, destination address, protocol ID, and source port.

mirrored port

The port to mirror. The port is also called the source port.

mirroring port

The port to which all traffic is mirrored, also referred to as the destination port.

mirroring multilink trunk

The multilink trunk to which the traffic is mirrored.

mirroring VLAN

The virtual Local Area Network (VLAN) to which the traffic is mirrored.

multicast group ID (MGID)

A hardware mechanism in the egress path that directs data to several ports simultaneously.

multihomed AS

An AS that has multiple connections to one or more ASs and does not carry transit traffic.

Multicast Link Discovery (MLD)

An asymmetric protocol. MLD specifies separate behaviors for multicast address listeners and multicast routers.

multicast router discovery (MRDISC)

Provides the automatic discovery of multicast capable routers. By listening to multicast router discovery messages, Layer 2 devices can determine where to send multicast source data and Internet Group Management Protocol (IGMP) host membership reports.

Multicast Router Discovery Protocol (MRDP)

Discovers multicast routers in a Layer 2 bridged domain configured for IGMP snooping.

Multicast Router Learning Protocol (MRLP)

Provides basic information between two core switches, for example, neighbor information learning for edge switches, messages that determine the forwarder, and multicast tree building information related to the edge switch.

MultiLink Trunking (MLT)

A method of link aggregation that uses multiple Ethernet trunks aggregated to provide a single logical trunk. A multilink trunk provides the combined bandwidth of multiple links and the physical layer protection against the failure of a single link.

multimode fiber (MMF)

A fiber with a core diameter larger than the wavelength of light transmitted that allows many modes of light to propagate. Commonly used with LED sources for low speed and short distance lengths. Typical core sizes (measured in microns) are 50/125, 62.5/125 and 100/140.

multiplexing

Carriage of multiple channels over a single transmission medium; a process where a dedicated circuit is shared by multiple users. Typically, data streams intersperse on a bit or byte basis (time division), or separate by different carrier frequencies (frequency division).

multiplexer (MUX)

A device that combines two or more signals into a signal composite data stream for transmission on a single channel.

multiple spanning tree bridge

A bridge that supports the common spanning tree (CST) and one or more multiple spanning tree instances (MSTI) and selectively maps frames classified in a VLAN to the CST or an MSTI.

multiple spanning tree configuration identifier

A name for the revision level and summary of a given allocation of VLANs to spanning trees.

multiple spanning tree configuration table

Allocates every possible VLAN to the CST or a specific MSTI.

multiple spanning tree instance (MSTI)

One of a number of spanning trees calculated by the Multiple Spanning Tree Protocol (MSTP) within an MST Region, to provide a simple and fully connected active topology for frames that belong to a VLAN mapped to the MSTI.

Multiple Spanning Tree Protocol (MSTP)

Configures multiple instances of the Rapid Spanning Tree Protocol (RSTP) on the switch.

multiple spanning tree region

A set of LANs and MST bridges physically connected by ports on the MST bridges.

Multiprotocol Label Switching (MPLS)

A technique promoted by the Internet Engineering Task Force (IETF) that integrates the label-swapping paradigm with network-layer routing to flexibly provide high-speed services with quality-of-service guarantees over IP and ATM networks.

N

nanometer (nm)

One billionth of a meter (10^9 meter). A unit of measure commonly used to express the wavelengths of light.

neighbor discovery (ND)

Used by IPv6 nodes (routers and hosts) on the same link to discover link layer addresses and obtain and advertise various network parameters and reachability information.

Network Address Translation (NAT)

Provides access to the Internet for network ports by using one or more globally unique IP addresses. Use NAT on a network to use one set of network addresses internally and a different set externally.

Network Basic Input/Output System (NetBIOS)

An application programming interface (API) that augments the DOS BIOS by adding special functions for Local Area Networks (LANs).

Network Interface Card (NIC)

A network interface device (NID) in the form of a circuit card installed in an expansion slot of a computer to provide network access.

Network Time Protocol (NTP)

A protocol that works with TCP that assures accurate local time keeping with reference to radio and atomic clocks located on the Internet. NTP synchronizes distributed clocks within milliseconds over long time periods.

network-to-network interface (NNI)

An interface between two networks in different management domains.

next hop

The next hop to which a packet can be sent to advance the packet to the destination.

Next Hop Label Forwarding Entry (NHLFE)

An index used to forward a labeled packet. It contains the next hop of the packet and instructions of what to do, either swap the label or pop the label stack.

nonbroadcast multiaccess (NBMA)

Interconnects multiple devices over a broadcast network through point-to-point links. NBMA reduces the number of IP addresses required for point-to-point connections.

nondispersion-shifted fiber (NDSF)

A type of optical fiber optimized for the 1310 nm transmission window.

NonVolatile Random Access Memory (NVRAM)

Random Access Memory that retains its contents after electrical power turns off.

nonzero-dispersion-shifted fiber (NZDSF)

A type of optical fiber optimized for high bit-rate and dense wavelength-division-multiplexing applications.

Nortel Networks command line interface (NNCLI)

Nortel Networks command line interface (NNCLI) is a common CLI that follows the industry standard. NNCLI is a common user interface for device management across Nortel products.

not so stubby area (NSSA)

Prevents the flooding of external link-state advertisements (LSA) into the area by providing them with a default route. An NSSA is a configuration of the Open Shortest Path First (OSPF) protocol.

O

Open Shortest Path First (OSPF)

A link-state routing protocol used as an Interior Gateway Protocol (IGP).

Open Systems Interconnection (OSI)

A suite of communication protocols, network architectures, and network management standards produced by the International Organization for Standardization (ISO). OSI-compliant systems can communicate with other OSI-compliant systems for a meaningful exchange of information.

operation, administration, and maintenance (OAM)

All the tasks necessary for providing, maintaining, or modifying switching system services.

Optical Ethernet (OE)

Provides seamless Layer 2 Ethernet connectivity for enterprise customers across both metropolitan area networks (MAN) and wide area networks (WAN).

Optical Ethernet Auto Discovery Mechanism (OE-ADM)

In the LPE, auto-discovery and distribution of VPN memberships are facilitated by the OE-ADM. The OE-ADM is a set of simple messages that are sent by the PE-Edges to the PE-Core, which result in provisioning actions on the PE-Core.

Optical Carrier-level 3 concatenation (OC-3c/STM-1)

An optical fiber transmission system that carries Synchronous Transport Signal (STS)-3c/Synchronous Transport Module (STM)-1 frame structures at 155 Mbit/s. Concatenation means only one logical data stream (rather than supporting a channelized structure) exists.

Optical Carrier-level 12 concatenation (OC-12c/STM-4)

An optical fiber transmission system that carries STS-12c/STM-4 frame structures at 622 Mbit/s. Concatenation means only one logical data stream (rather than supporting a channelized structure) exists.

Optical Time Domain Reflectometer (OTDR)

Device used to inspect optical fiber links by sending optical pulses down the link and monitoring the light reflected back to the device. Can calculate overall fiber attenuation and highlight points of loss or breaks in the fiber.

out of band (OOB)

The capacity to deliver information using a modem or other asynchronous connection.

P

Packet Capture Tool (PCAP)

A data packet capture tool that captures ingress and egress (E-modules only) packets on selected I/O ports. You can analyze captured packets for troubleshooting purposes.

packet loss

Expressed as a percentage of packets dropped over a specified interval. Keep packet loss to a minimum to deliver effective IP telephony and IP video services.

Packet over SONET (PoS)

A technology that carries IP packets directly over Synchronous Optical Network (SONET) for metropolitan area networks (MAN) and wide area networks (WAN) without a data-link facility.

packet transmission opportunities (PTO)

Used to assign weights to the eight egress queues. The switch assigns additional PTOs to high priority queues so time sensitive transmissions forward with minimum latency.

Password Authentication Protocol (PAP)

A procedure used by Point-to-Point Protocol (PPP) servers to validate a connection request. The PAP is the simplest method of enabling security on PPP links. During link establishment, the peer (caller) sends its peer ID and password to the authenticator. If the ID and password match the values stored by the Authenticator, the connection proceeds.

peak cell rate (PCR)

The upper limit on the time interval between two consecutive ATM cell emissions.

penultimate router

Penultimate means next-to-last. In this case, it refers to the next-to-last provider router in the network.

per-hop behavior (PHB)

A traffic class forwarding treatment based on criteria defined in the DiffServ field.

permanent virtual connection (PVC)

An ATM channel connection or path connection configured at the network management interface.

Personal Computer Memory Card International Association (PCMCIA)

A standard software and hardware interface that accommodates credit-card-sized hardware cards into a personal computer.

physical layer (PHY)

Layer 1 of the Open System Interconnection (OSI) model that provides raw information channels to Layer 2. Protocols depend on whether the interface is the basic rate interface (BRI) or primary rate interface (PRI).

Port Interface Module (PIM)

A Field Programmable Gate Array (FPGA) device on the R module.

point of presence (PoP)

A physical layer within a local access and transport area (LATA) at which an interLATA carrier establishes itself to obtain LATA access, and to which the local exchange carrier provides access services.

Point-to-Point Protocol (PPP)

A network protocol used to dial into an Internet Service Provider (ISP). Serial Line Interface Protocol (SLIP) and PPP provide full Transmission Control Protocol/Internet Protocol (TCP/IP) capabilities to the casual dial-up user.

policing

Ensures that a traffic stream follows the domain service provisioning policy or service level agreement (SLA).

port

A physical interface that transmits and receives data.

Port Access Entity (PAE)

Software that controls each port on the switch. The PAE, which resides on the Nortel Ethernet Routing Switch 8600, supports authenticator functionality. The PAE works with the Extensible Authentication Protocol over LAN (EAPoL).

port mirroring

A feature that sends received or transmitted traffic to a second destination.

port VLAN ID

Used to coordinate VLANs across multiple switches. When you create a port-based VLAN on a switch, assign a VLAN identification number (VLAN ID) and specify the ports that belong to the VLAN.

PPP over Ethernet (PPPoE)

Uses the Point-to-Point Protocol with Ethernet as the transport protocol.

Pragmatic General Multicast (PGM)

A standard transport-level protocol that addresses the disadvantages inherent in other multicasting protocols such as unreliable packet delivery, packet duplication, and network congestion.

prefix

A group of contiguous bits, from 0 to 32 bits in length, that defines a set of addresses.

primary rate interface (PRI)

An integrated service digital network (ISDN) interface standard designed in North America as having 23 circuit-switched B channels and one D channel, which operate at 64 kbit/s.

private virtual circuit (PVC)

An ATM channel connection or path connection configured at the network management interface.

Provider Edge (PE) device

A device owned and operated by the service provider. It maintains knowledge of VPN information and enforces service level agreements. The PE hosts the UNIs that supply VPN services to customers and is logically adjacent to the CE.

Protocol Data Units (PDUs)

A unit of data that is specified in a protocol of a given layer and that consists of protocol-control information of the given layer and possibly user data of that layer.

programmable I/O module (PIM)

A Field Programmable Gate Array (FPGA) device on the R module.

Protocol Independent Multicast multicast border router (PIM MBR)

Connects PIM domains to other multicast routing domains and to the Internet.

Protocol Independent Multicast, Source Specific (PIM-SSM)

Uses only shortest-path trees to provide multicast services based on subscription to a particular (source, group) channel.

Protocol Independent Multicast, Sparse Mode (PIM-SM)

Adds a Rendezvous Point router to avoid multicast-data flooding. Use PIM-SM when receivers for multicast data are sparsely distributed throughout the network.

Protocol Independent Multicast, Split MultiLink Trunking (PIM-SMLT)

Builds a virtual switch that represents the two switches of the split multilink trunk core.

provider core router (P router)

A router in the core of a provider network that supports tunnels between provider edge (PE) routers, but is not connected to a customer device. P routers do not need to support VPN functionality.

provider edge (PE)

A router in the provider network that connects to customer edge (CE) devices located at customer sites. PE routers support VPN functionality. Within a single VPN, pairs of PE routers connect through a multiprotocol label switching (MPLS) label switched path (LSP) tunnel. A PE router can act as a P router.

Q

quality of service (QoS)

The collective effect of service performances that determine the degree of satisfaction of a service user.

R

Random Access Memory (RAM)

Memory into which you can write and read data. A solid state memory device used for transient memory stores. You can enter and retrieve information from any storage position.

Rapid Spanning Tree Protocol (RSTP)

Reduces the recovery time after a network breakdown. RSTP enhances switch-generated Topology Change Notification (TCN) packets to reduce network flooding.

Read Write All (RWA)

An access class that lets users access all menu items and editable fields.

Real-Time Streaming Protocol (RTSP)

An application-level protocol that addresses reliability, quality, fidelity, packet loss, and start and stop commands for audio and video real-time data streaming.

record route object (RRO)

Describes the actual path taken by a label switched path (LSP). An RRO describes all the links traversed by the LSP. The RRO contains the IP addresses of the links traversed and can contain the link labels. RRO is an option used by the Resource Reservation Protocol-Traffic Engineering (RSVP-TE) protocol when setting up a path in an MultiProtocol Label Switching (MPLS) network.

reduced instruction set computer (RISC)

A computer that employs a small, simplified set of frequently used instructions for rapid execution.

remarking

Changes the Differentiated Services Code Point (DSCP) of a packet, in accordance with a service level agreement (SLA).

Remote Authentication Dial-in User Service (RADIUS)

A protocol that authenticates, authorizes, and accounts for remote access connections that use dial-up networking and virtual private network (VPN) functionality.

remote defect indication (RDI)

A signal transmitted upstream when a system detects a downstream fault.

remote login (rlogin)

An application that provides a terminal interface between hosts (usually UNIX) that use the TCP/IP network protocol. Unlike Telnet, rlogin assumes the remote host is, or behaves like, a UNIX host.

remote mirroring

A mirroring port that encapsulates traffic into a Layer 2 header and transmits it to a remote mirror target (RMT) for decapsulation. The packet transmits over a Layer 2 network and preserves the original packet.

remote mirror source (RMS)

The port that generates the mirrored encapsulated traffic.

remote mirror target (RMT)

The port that decapsulates the remote mirror traffic and transmits it out of the Nortel Ethernet Routing Switch 8600.

remote monitoring (RMON)

A remote monitoring standard for Simple Network Management Protocol (SNMP)-based management information bases (MIB). The Internetwork Engineering Task Force (IETF) proposed the RMON standard to provide guidelines for remote monitoring of individual LAN segments.

rendezvous point (RP)

The root of the shared tree. One RP exists for each multicast group. The RP gathers information about available multicast services through the reception of control messages and the distribution of multicast group information. Protocol Independent Multicast (PIM) uses RPs.

request for comments (RFC)

A document series published by the Internet Engineering Task Force (IETF) that describe Internet standards.

requested shaping rate (RSR)

One of a set of ATM traffic characterization values used to define traffic characteristics through the traffic descriptor types.

resilient packet ring (RPR)

A shared packet edge ring connection, where both paths around the ring carry traffic, that allows double bandwidth on each ring.

Reverse Address Resolution Protocol (RARP)

A protocol that maintains a database of mappings between physical hardware addresses and IP addresses.

reverse path checking (RPC)

Prevents packet forwarding for incoming IP packets with incorrect or forged (spoofed) IP addresses.

reverse path forwarding (RPF)

Prevents a packet from forging its source IP address. Typically, the system examines and validates the source address of each packet.

Report Route Object (RRO)

A feature of the RSVP. It allows the path through the MPLS cloud to be displayed at the sender of the path if RRO is set to true.

Resource Reservation Protocol-Traffic Engineering (RSVP-TE)

A label signaling protocol that establishes traffic-engineered label switched paths (LSP) through the Multiprotocol Label Switching (MPLS) network.

RIP (Routing Information Protocol)

A distance vector protocol in the IP suite, used by IP and IPX network-layer protocols, that enables routers in the same AS to exchange routing information by means of periodic updates. It is most often used as a very simple IGP within small networks.

route flapping

An instability that is associated with a prefix, where the associated prefix routes may exhibit frequent changes in availability over a period of time.

route table manager (RTM)

Determines the best route to a destination based on reachability, route preference, and cost.

route reflector

A BGP speaker that advertises routes learned from its route reflector clients to other IBGP neighbors.

route reflector client

A BGP speaker that advertises its learned routes to a route reflector for readvertisement of its routes to the rest of the AS.

Routed SMLT (RSMLT)

Provides full redundancy in core networks and rapid failover—eliminating routing protocol timer dependencies when network failures occur.

Remote Service Provider (RSP)
Resource Reservation Protocol-Traffic Engineering (RSVP-TE)

A protocol with traffic engineering extensions, which reserves network resources to establish explicitly routed MPLS tunnels.

Routing Information Protocol (RIP)

Distance-vector-based interior gateway routing protocol.

Routing policy

Any form of routing that is influenced by factors other than the default algorithmically best route, such as the shortest or quickest path.

RSMLT VLAN

A virtual Local Area Network (VLAN) with RSMLT enabled for router redundancy and protected by active-active SMLT aggregation switch default gateways.

S

Source Address and Destination Address (SA/ DA) Secure Copy (SCP)

Securely transfers files between the switch and a remote station.

Secure Shell (SSH)

Used for secure remote logons and data transfer over the Internet. SSH uses encryption to provide security.

Secure Sockets Layer (SSL)

An Internet security encryption and authentication protocol for secure point-to-point connections over the Internet and intranets, especially between clients and servers.

Serial Line Internet Protocol (SLIP)

A network protocol installed in a computer to permit access to communications services, such as the Internet, e-mail, Telnet, File Transfer Protocol (FTP), and the Web.

Service Advertisement Protocol (SAP)

Used by printers, file servers, and gateways to announce their availability to nodes on the network.

service level agreement (SLA)

A service contract that specifies the forwarding service that traffic receives.

shim

MPLS uses a shim header for Ethernet packets so they can accommodate a label in their header. MPLS uses the shim to make forwarding decisions. The shim label is a 32-bit identifier used to identify a FEC.

shortest path first (SPF)

A class of routing protocols that use Dijkstra's algorithm to compute the shortest path through a network, according to specified metrics, for efficient transmission of packet data.

shortest path tree (SPT)

Creates a direct route between the receiver and the source for group members in a Protocol Independent Multicast - Sparse Mode (PIM-SM) domain.

signal computing system architecture

An open-system protocol that describes devices and specifies interfaces for a signal processing system for PC-based communications processing.

Simple Network Management Protocol (SNMP)

Administratively monitors network performance through agents and management stations.

Simple Loop Prevention Protocol (SLPP)

Is used to prevent loops in a SMLT network.

Single Link SMLT (SLT)**single mode fiber (SMF)**

One of the various light waves transmitted in an optical fiber. Each optical signal generates many modes, but in single-mode fiber only one mode is transmitted. Transmission occurs through a small diameter core (approximately 10 micrometers), with a cladding that is 10 times the core diameter. These fibers have a potential bandwidth of 50 to 100 GHz per kilometer.

single spanning tree bridge

A bridge that can support only a single spanning tree, the common spanning tree (CST).

SMLT aggregation switch

Connects to multiple wiring closet switches, edge switches, or Customer Premise Equipment (CPE) devices.

SMLT client

A switch located at the edge of the network, such as in a wiring closet or CPE. An SMLT client switch performs link aggregation but does not require Split MultiLink Trunking (SMLT) intelligence.

source path messages (SPM)

Allows the network element, a Nortel Ethernet Routing Switch 8600 with Pragmatic General Multicast (PGM) enabled, to learn the source path and maintain information about the PGM session.

spanning tree

A simple, fully-connected active topology formed from the arbitrary physical topology of connected bridged Local Area Network components by relaying frames through selected bridge ports. The protocol parameters and states that are used and exchanged to facilitate the calculation of the active topology and to control the bridge relay function.

Spanning Tree Group (STG)

A collection of ports in one spanning tree instance.

Spanning Tree Protocol (STP)

MAC bridges use the STP to exchange information across Local Area Networks to compute the active topology of a bridged Local Area Network in accordance with the Spanning Tree Protocol algorithm.

Split MultiLink Trunking (SMLT)

A Nortel extension to IEEE 802.3ad, provides nodal and link failure protection and flexible bandwidth scaling to improve on the level of Layer 2 resiliency.

SSL Acceleration Module (SAM)

Intelligently accelerates secure business transactions and confidential data by off-loading SSL processing from local servers without imposing delays on other traffic in the same data path.

sustainable cell rate (SCR)

The expected rate of cell transmission on a nonconstant bit rate (CBR) transmission.

Switch Fabric (SF)

In signal computing system architecture (SCSA), the facility that connects two (or more) transmitting or receiving service providers. Network interfaces reside on line cards that provide connection between a switch fabric and external networks.

Switch Fabric/Central Processor Unit (SF/CPU)

The board that resides in slot 5 or 6 of the Nortel Ethernet Routing Switch 8600 system chassis.

switched multimegabit data service (SMDS)

A connectionless, broadband, packet-switched data service that provides LAN-like performance and features in metropolitan or wide areas.

synchronous digital hierarchy (SDH)

A European digital transmission hierarchy based on time division multiplexing.

Synchronous Dynamic Random Access Memory (SDRAM)

A form of dynamic random access memory (DRAM) that can run at higher clock speeds than conventional DRAM. SDRAM employs a bursting technique in which the DRAM predicts the address of the next memory location to access.

synchronous optical network (SONET)

A family of fiber optic transmission rates that provides the flexibility to transport many digital signals with different capacities. This American

National Standards Institute (ANSI) standard provides transmission from OC-1 to OC-48 and greater.

**System Administration, Networking and Security
Institute (SANS)**

The research and education organization for network administrators and security professionals.

T

TCP (Transport Control Protocol)

The main reliable transport protocol used in the Internet (and with BGP).

transparent domain identifier (TDI)

A User-to-Network Interface (UNI) port configured as transparent service type assigns all traffic to its associated transparent domain using the TDI.

Transparent LAN Service (TLS)

TLS is the component of the Nortel Networks OE solution that allows a group of customer sites to appear as one single LAN, regardless of their geographic location. (See also Virtual Private LAN Services [VPLS]).

Time Division Multiplexing (TDM)

A method that obtains a number of channels over a single path by dividing the path into a number of time slots and then assigning each channel its own intermittently repeated time slot.

time-to-live (TTL)

The field in a packet used to determine the valid duration for the packet; the TTL determines the packet lifetime. The system discards a packet with a TTL of zero.

traffic engineering (TE)

A method that guarantees performance in a network.

traffic profile

The temporal properties of a traffic stream, such as rate.

transit AS

An AS that has multiple connections to one or more ASs and is used (with certain policy restrictions) to carry both transit and local traffic.

Transmission Control Protocol (TCP)

Provides flow control and sequencing for transmitted data over an end-to-end connection.

Transmission Control Protocol over IP (TCP/IP)

A protocol stack designed to connect different networks.

Transparent LAN Services (TLS)

A network application that provides a virtual Local Area Network (VLAN) the ability to transmit customer Ethernet packets across a shared network.

Trivial File Transfer Protocol (TFTP)

A protocol that governs transferring files between nodes without protection against packet loss.

trunk

A logical group of ports that behaves like a single large port.

trunk port

On the Ethernet Routing Switch 8600, a trunk port is a port that connects to the service provider network such as the MPLS environment.

type of service (TOS)

A field in the IPv4 header that determines the Class of Service prior to the standardization of Differentiated Services.

tunnel

See LSP.

tunnel groups

A collection of RSVP tunnels.

Television (TV)

A widely used telecommunication system for broadcasting and receiving moving pictures and sound over a distance.

U

universal asynchronous receiver-transmitter (UART)

A device that converts outgoing parallel data to serial transmission and incoming serial data to parallel for reception.

Universal/Local (U/L)

Determines global and local link addresses; used with the Extended Unique Identifier (EUI).

universal resource locator (URL)

A standardized method that represents different documents, media, and network services on the World Wide Web.

UNIX

A powerful and complex computer operating system that runs data processing and telephone systems. Provides multitasking, multiuser capabilities.

unshielded twisted pair (UTP)

A cable with one or more pairs of twisted insulated copper conductors bound in a single plastic sheath.

user-based security model (USM)

A security model that uses a defined set of user identities for authorized users on a particular Simple Network Management Protocol (SNMP) engine.

user-based policies (UBP)

Establishes and enforces roles and conditions on an individual user basis for access ports in the network.

User Datagram Protocol (UDP)

In TCP/IP, a packet-level protocol built directly on the Internet Protocol layer. TCP/IP host systems use UDP for application-to-application programs.

user-to-network interface (UNI)

An interface between ATM user equipment and ATM network equipment.

upstream node

An upstream node refers to the node that the packet exits on its way to the downstream node on the next hop LSR.

V

variable bit rate (VBR)

The capability of the encoding algorithm to dynamically switch between 32 and 24 kbytes/s.

view-based access control model (VACM)

Provides context, group access, and group security levels based on a predefined subset of management information base (MIB) objects.

virtual connection (VC)

A communication channel that provides sequential unidirectional transport of Asynchronous Transfer Mode (ATM) cells among ATM layer entities.

Virtual Link Aggregation Control Protocol (VLACP)

A Layer 2 handshaking protocol which can detect end-to-end failure between two physical Ethernet interfaces.

Virtual Local Area Network (VLAN)

Virtual LAN as defined in the IEEE 802.1Q standard. VLANs divide the LANs into smaller groups without interfering with the physical network.

Virtual Private LAN Service (VPLS)

A multipoint virtual private network (VPN).

Virtual Private Network (VPN)

A private communications network that uses public networks to transfer data. VPN users can be in geographically separate locations.

virtual private network identifier (VPN-ID)

A globally significant VPN identifier.

virtual router (VR)

An abstract object managed by the Virtual Router Redundancy Protocol (VRRP) that acts as a default router for hosts on a shared LAN.

virtual router forwarding (VRF)

Provides traffic isolation between the customers operating over the same node. Each virtual router emulates the behavior of a dedicated hardware router by providing separate routing functionality, and the network treats each VRF as a separate physical router.

Virtual Router Redundancy Protocol (VRRP)

A protocol used in static routing configurations, typically at the edge of the network. This protocol operates on multiple routers on an IP subnet and elects a primary gateway router. When the primary router fails, a backup router is quickly available to take its place.

Voice over IP (VOIP)

The technology that delivers voice information in digital form in discrete packets using the Internet Protocol (IP) rather than the traditional circuit-committed protocols of the public switched telephone network (PSTN).

W

wavelength division multiplexing (WDM)

Simultaneously transmits many colors (wavelengths) of laser light down the same optical fiber to increase the amount of transferred information.

Web Switching Module (WSM)

Provides content-intelligent processing of Web-based traffic.

weighted round robin (WRR)

A mechanism that uses the packet transmit opportunity (PTO) of a queue to determine which queue to process first.

well-known attribute

A BGP attribute that is required to be known by all BGP implementations.

Wide Area Network (WAN)

A network that provides communication services to a geographic area larger than that served by a Local Area Network or a metropolitan area network, and that can use or provide public communication facilities.

wiring closet (WC)

A central termination area for telephone or network cabling or both.

Nortel Ethernet Routing Switch 8600

Terminology

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